

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#19

In Re Application of:

Brian R. Murphy et al.

Serial No.: 09/458,813

Group Art Unit: 1648

Filing Date: December 10, 1999

Examiner: S. Brown

For: USE OF RECOMBINANT LIVE-ATTENUATED PARAINFLUENZA
VIRUS (PIV) AS A VECTOR TO PROTECT AGAINST DISEASE CAUSED
BY PIV AND RESPIRATORY SYNCYTIAL VIRUS (RSV)

DATE OF DEPOSIT: 4/12/2002

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20231.

TYPED NAME: Jeffrey J. King
REGISTRATION NO.: 38,515

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Washington, DC 20231

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ESTABLISHMENT OF RIGHT OF ASSIGNEE TO TAKE ACTION
AND
REVOCATION AND POWER OF ATTORNEY

Dear Sir:

The undersigned is empowered to act on behalf of the assignee below (the "Assignee").
The original assignment was recorded in the United States Patent and Trademark Office on
May 22, 2000 at Reel 010845, Frames 0249-0253. A copy of the Assignment is attached. This
Assignment represents the entire chain of title of this invention from the Inventors Brian R.
Murphy, Peter L. Collins, Anna P. Durbin, Mario H. Skiadopoulos, and Tao Tao to the Assignee.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#20

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Commissioner for Patents
Washington, DC 20231

ASSOCIATE POWER OF ATTORNEY

Sir:

The undersigned attorney of record, pursuant to the provisions of 37 C.F.R. §§ 1.33 and 1.34, and M.P.E.P. §402.02, hereby appoints the registrants of Woodcock Washburn LLP, One Liberty Place, 46th Floor, Philadelphia, Pennsylvania 19103, telephone (215) 568-3100, as its agents and attorneys to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith.

Done on this 11 day of MARCH, 2002, at Rockville, Maryland.

UNITED STATES DEPARTMENT OF
HEALTH AND HUMAN SERVICES

By:

Printed Name:

Registration No.:

for: Dr. Jack Spiegel, Director, DTPT
Office of Technology Transfer
National Institutes of Health
6011 Executive Boulevard, Suite 325
Rockville, MD 20852
Telephone (301) 496-7056
Facsimile (301) 402-0220

DHHS CASE NO. E-089-97/5

54669-1

I declare that all statements made herein are true, and that all statements made upon information and belief are believed to be true, and further, that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that willful, false statements may jeopardize the validity of the application, or any patent issuing thereon.

The undersigned hereby revokes any previous powers of attorney in the subject application, and hereby appoints the below listed registrants of National Institutes of Health Offices of Technology Transfer, 6011 Executive Boulevard, Suite 325, Rockville, MD 20852, telephone (301) 496-7056, as its agents and attorneys with full power of substitution and revocation to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith. This appointment is to be to the exclusion of the inventor(s) and his/her/their attorney(s) in accordance with the provisions of 37 C.F.R. § 3.71.

<u>James C. Haight</u>	Reg. No. <u>25,588</u>	
<u>David R. Sadowski</u>	Reg. No. <u>32,808</u>	
<u>Jack Spiegel</u>	Reg. No. <u>34,477</u>	
<u>Susan S. Rucker</u>	Reg. No. <u>35,762</u>	
<u>Stephen Finley</u>	Reg. No. <u>36,357</u>	
<u>Steven Ferguson</u>	Reg. No. <u>38,488</u>	38,448
<u>John Peter Kim</u>	Reg. No. <u>38,514</u>	
<u>Norbert Pontzer</u>	Reg. No. <u>40,777</u>	
<u>Richard U. Rodriguez</u>	Reg. No. <u>45,980</u>	
<u>Marlene Shinn</u>	Reg. No. <u>46,005</u>	
<u>Dale Berkley</u>	Reg. No. <u>32,319</u>	42319
<u>Catherine M. Joyce</u>	Reg. No. <u>40,668</u>	

The National Institutes of Health Office of Technology Transfer has been duly delegated responsibility for such patent matters under the authority of the Department of Health and Human Services Secretary Louis W. Sullivan's May 21, 1991, memorandum appearing in the Friday, June 7, 1991, Federal Register Notices at Vol. 56, No. 110, pp. 26418-26419. The undersigned is authorized to exercise such authority in this matter.

Done on this 11 day of MARCH, 2002, at Rockville, Maryland.

UNITED STATES DEPARTMENT OF HEALTH
AND HUMAN SERVICES

By: Jack Spiegel
Printed Name: JACK SPIEGEL
Registration No.: 34477
for: Dr. Jack Spiegel, Director, *DTDT*
Office of Technology Transfer
National Institutes of Health
6011 Executive Boulevard, Suite 325
Rockville, MD 20852
Telephone (301) 496-7056
Facsimile (301) 402-0220

DHHS CASE NO. E-089-97/5



01762 000330US
UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

JJ King



101381790A

AUGUST 07, 2000

PTAS
TOWNSEND AND TOWNSEND AND CREW LLP
JEFFREY J. KING
TWO EMBARCADERO CENTER, 8TH FLOOR
SAN FRANCISCO, CALIFORNIA 94111-3834

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 05/22/2000

REEL/FRAME: 010845/0249
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MURPHY, BRIAN R.

DOC DATE: 04/12/2000

ASSIGNOR:

COLLINS, PETER L.

DOC DATE: 04/12/2000

ASSIGNOR:

DURBIN, ANNA P.

DOC DATE: 04/17/2000

ASSIGNOR:

SKIADOPOULOS, MARIO H.

DOC DATE: 04/12/2000

ASSIGNOR:

TAO, TAO

DOC DATE: 04/12/2000

TOWNSEND & TOWNSEND
& CREW
RECEIVED
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ASSIGNEE:

DEPARTMENT OF HEALTH AND HUMAN
SERVICES, THE, GOVERNMENT OF THE
UNITED STATES OF AMERICA AS
REPRESENTED BY, THE
6011 EXECUTIVE BOULEVARD, SUITE
325
ROCKVILLE, MARYLAND 20852

SERIAL NUMBER: 09458813
PATENT NUMBER:

FILING DATE: 12/10/1999
ISSUE DATE:

DOROTHY RILEY, PARALEGAL
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

06-15-2000

Attorney Docket No. 17634-000330US
DHHS Ref No. E-089-97/5FORM PTO-1595
(Rev. 6-93)

101381790

U.S. Department of Commerce
Patent and Trademark Office

To the Honorable Asst. Commissioner for Patents. Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

BRIAN R. MURPHY
PETER L. COLLINS
ANNA P. DURBIN
MARIO H. SKIADOPOULOS
TAO TAOAdditional name(s) of conveying parties attached? ☐ Yes
☒ No.

2. Name and address of receiving party(ies)

Name: THE GOVERNMENT OF THE UNITED STATES OF
AMERICA, as represented by THE DEPARTMENT OF HEALTH
AND HUMAN SERVICES

Internal Address:

Street Address: 6011 Executive Boulevard, Suite 325

City: Rockville State: Maryland ZIP: 20852

Additional names and addresses attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other:

Execution Date: April 12, 2000 and April 17, 2000

4. Application Number(s) or Patent Numbers.

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No(s): 09/458,813

B. Patent No(s):

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence
concerning document should be mailed:Name: Jeffrey J. King
TOWNSEND AND TOWNSEND AND CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
(206) 467-9600

6. Total number of applications and patents involved 1

7. Total fee (37 CFR 3.41): \$40

☐ Enclosed ☒ Charge Fees to Deposit Account☒ Charge any additional fees associated with this paper or during
the pendency of this application, or credit any overpayment, to
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8. Deposit account number: 20-1430

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true of copy of the
original document.*Jeffrey J. King
Name of Person Signing

Signature

May 15, 2000
Date

Atty Reg. No. 38,515

Total number of pages including cover sheet, attachments and document 5

10. Change Correspondence Address to that of Part 5? ☒ Yes ☐ No

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Mail documents to be recorded with required cover to:

Asst. Commissioner for Patents
Box: Assignments
Washington, D.C. 20231

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, BRIAN R. MURPHY, of 5410 Tuscarawas Road, Bethesda, MD 20816, PETER L. COLLINS, of 12304 Village Square, #401, Rockville, MD 20852, ANNA P. DURBIN, of 806 Hudson Avenue, Takoma Park MD 20912, MARIO H. SKIADOPOULOS, of 8303 Aqueduct Road, Potomac, MD 20854, and TAO TAO, of 10684 Weymouth Street, #104, Bethesda, MD 20814, and hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: USE OF RECOMBINANT LIVE-
 ATTENUATED PARAINFLUENZA VIRUS
 (PIV) AS A VECTOR TO PROTECT
 AGAINST DISEASE CAUSED BY PIV AND
 RESPIRATORY SYNCYTIAL VIRUS (RSV)

Filing Date: December 10, 1999

Application No.: 09/458,813 ; and

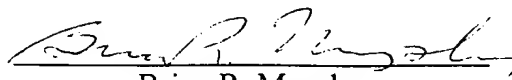
WHEREAS, THE GOVERNMENT OF THE UNITED STATES OF AMERICA as represented by the Department of Health and Human Services, of 6011 Executive Boulevard, Suite 325, Rockville, Maryland, 20852, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 4/12/00


Brian R. Murphy

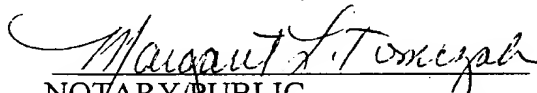
STATE OF MARYLAND)

COUNTY OF MONTGOMERY)

ss.

On 4/12/00, before me, BRIAN MURPHY
(insert name of notary public), personally appeared BRIAN R. MURPHY, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

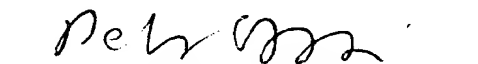
WITNESS my hand and official seal.


NOTARY PUBLIC

My Commission Expires:

MY COMMISSION EXPIRES
MARCH 1, 2003
MARGARET L. TOMCZAK
NOTARY PUBLIC

Dated: 4/12/00


Peter L. Collins

STATE OF MARYLAND)

COUNTY OF MONTGOMERY)

ss.

On 4/12/00, before me, PETER L. COLLINS
(insert name of notary public), personally appeared PETER L. COLLINS, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

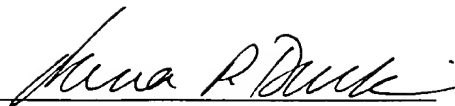
WITNESS my hand and official seal.


NOTARY PUBLIC

My Commission Expires:

MY COMMISSION EXPIRES
MARCH 1, 2003
MARGARET L. TOMCZAK
NOTARY PUBLIC

Dated: 4/17/00



Anna P. Durbin

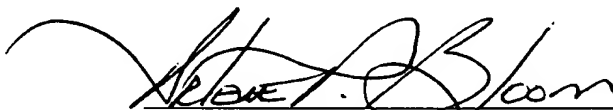
STATE OF MARYLAND)

COUNTY OF MONTGOMERY)

ss.

On 4/17/2000, before me, Anna Durbin
(insert name of notary public), personally appeared ANNA P. DURBIN, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

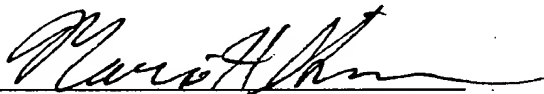
WITNESS my hand and official seal.



NOTARY PUBLIC

My Commission Expires: Nov. 4, 2000

Dated: 04/12/00



Mario H. Skiadopoulos

STATE OF MARYLAND)

COUNTY OF MONTGOMERY)

ss.

On 4/12/00, before me, MARIO H. SKIADOPOULOS
(insert name of notary public), personally appeared MARIO H. SKIADOPOULOS, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

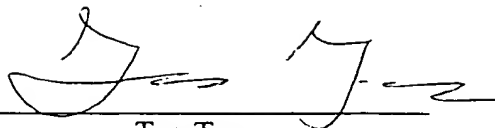
WITNESS my hand and official seal.



NOTARY PUBLIC

My Commission Expires: ~~MY COMMISSION EXPIRES~~
MARCH 1, 2003
MARGARET L. TOMCZAK
NOTARY PUBLIC

Dated: 4/12/2003


Tao Tao

STATE OF MARYLAND)
)
COUNTY OF MONTGOMERY) ss.

On 4/12/00, before me, TAO TAO
(insert name of notary public), personally appeared TAO TAO, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.


NOTARY PUBLIC

My Commission Expires: _____

SE 5002893 v1

**MY COMMISSION EXPIRES
MARCH 1, 2003
MARGARET L. TOMCZAK
NOTARY PUBLIC**